

## CLAIMS

1. A particulate water absorbent containing a water  
5 absorbent resin prepared by crosslinking a water-soluble  
unsaturated monomer,

the water absorbent resin being particular in shape and  
containing particles of a particle size in a range of not less  
than 106  $\mu\text{m}$  and less than 850  $\mu\text{m}$  in an amount of not less  
10 than 90 mass percent with respect to a total mass of the  
water absorbent resin,

the particulate water absorbent having a first salt  
concentration absorption index of not less than 0.60 as  
measured by a formula (1) below when ion exchange water is  
15 used as an aqueous solution of a constant salt concentration:

(salt concentration absorption index) = (absorbency for  
an aqueous solution of a constant salt concentration against  
a pressure of 4.83 kPa)/(absorbency for an aqueous solution  
of a constant salt concentration against no pressure) ... (1),

20 where the numerator is absorbency against a pressure of 4.83  
kPa when the particulate water absorbent is impregnated with  
the aqueous solution of a constant salt concentration for 60  
minutes, and the denominator is absorbency against no  
pressure when the particulate water absorbent is impregnated  
25 with the aqueous solution of a constant salt concentration for

-85 -

60 minutes.

2. A particulate water absorbent containing a water absorbent resin prepared by crosslinking a water-soluble unsaturated monomer,

the water absorbent resin being particular in shape and containing particles of a particle size in a range of not less than 106  $\mu\text{m}$  and less than 850  $\mu\text{m}$  in an amount of not less than 90 mass percent with respect to a total mass of the water absorbent resin,

the particulate water absorbent having an absorbency of not less than 50 g/g when impregnated with ion exchange water for 60 minutes against a pressure of 4.83 kPa.

3. The particulate water absorbent as set forth in claim 1, wherein the particulate water absorbent has a second salt concentration absorption index of not less than 0.80 as measured by the formula (1) when the aqueous solution of a constant salt concentration is an aqueous solution of 0.10 mass percent sodium chloride.

4. The particulate water absorbent as set forth in claim 1 or 3,

wherein the particulate water absorbent has third, fourth, fifth, and sixth salt concentration absorption indices

-86 -

as measured by the formula (1) when aqueous solutions of 0.30 mass percent, 0.50 mass percent, 0.70 mass percent, and 0.90 mass percent sodium chloride, respectively, are used as the aqueous solution of a constant salt concentration,  
5 and

wherein at least one of the third, fourth, fifth, and sixth salt concentration absorption indices is not less than 0.90.

10 5. The particulate water absorbent as set forth in claim 4, wherein the particulate water absorbent has a mean salt concentration absorption index of not less than 0.90 as measured by taking a mean of the third, fourth, fifth, and sixth salt concentration absorption indices.

15 6. The particulate water absorbent as set forth in claim 5, wherein the mean salt concentration absorption index has a standard deviation in a range of 0 to 0.100.

20 7. The particulate water absorbent as set forth in any one of claims 1 through 6, wherein the particulate water absorbent has a first salt tolerance index of not less than 0.40 as measured by a formula (2) below when an aqueous solution of 0.10 mass percent sodium chloride is used as an aqueous solution of a constant salt concentration:

25 (salt tolerance index) = (absorbency for an aqueous

-87 -

solution of a constant salt concentration against no pressure)/(absorbency for ion exchange water against no pressure) ... (2),

where the numerator is absorbency against no pressure when the particulate water absorbent is impregnated with the aqueous solution of a constant salt concentration for 60 minutes, and the denominator is absorbency against no pressure when the particulate water absorbent is impregnated with ion exchange water for 60 minutes.

8. The particulate water absorbent as set forth in any one of claims 1 through 7, wherein the particulate water absorbent has an absorbency in a range of 10 g/g to 27 g/g when impregnated with an aqueous solution of 0.90 mass percent sodium chloride for 60 minutes against no pressure.

9. The particulate water absorbent as set forth in any one of claims 1 through 8, wherein the particulate water absorbent has an absorbency in a range of 10 g/g to 27 g/g when impregnated with an aqueous solution of 0.90 mass percent sodium chloride for 60 minutes against a pressure of 4.83 kPa.

10. The particulate water absorbent as set forth in any one of claims 1 through 9, wherein the particulate water

-88 -

absorbent further contains water-insoluble fine particles.

11. The particulate water absorbent as set forth in any one of claims 1 through 10, wherein the particulate water absorbent has a gel permeability index of not less than 15 for ion exchange water against a pressure of 2.07 kPa.

12. The particulate water absorbent as set forth in any one of claims 1 through 11, wherein the particulate water absorbent has a gel permeability index of not less than 50 for an aqueous solution of 0.30 mass percent sodium chloride against a pressure of 2.07 kPa.

13. The particulate water absorbent as set forth in any one of claims 1 through 12, wherein the particulate water absorbent has a gel permeability index of not less than 15 for an aqueous solution of 0.70 mass percent sodium chloride against a pressure of 4.83 kPa.

14. The particulate water absorbent as set forth in any one of claim 1 through 13, wherein the water absorbent resin is treated by a surface modification process.

15. The particulate water absorbent as set forth in claim 14, wherein the surface modification process crosslinks a

surface of the water absorbent resin.

16. The particulate water absorbent as set forth in any one of claims 1 through 15, wherein the particulate water absorbent resin contains a carboxylic group.

17. The particulate water absorbent as set forth in any one of claims 1 through 16, wherein the water-soluble unsaturated monomer contains an acrylic acid and/or a salt of acrylic acid.

18. A sanitary article for absorbing a body fluid, comprising the particulate water absorbent of any one of claims 1 through 17.

19. The sanitary article as set forth in claim 18, further comprising an absorption layer whose core concentration is in a range of not less than 0.3 to not more than 1.0 as measured by a formula (3) below:

(core concentration) = (mass of particulate water absorbent)/((mass of particulate water absorbent) + (mass of fiber material)) ... (3).